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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,681

01/05/2007

Maurits Van Camp

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45473 7590 11/04/2009  
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EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

11/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,681	<b>Applicant(s)</b> VAN CAMP ET AL.	
	<b>Examiner</b> TIMA M. MCGUTHRY-BANKS	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-16, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-11 are cancelled, Claim 12 is currently amended, Claims 13-20 are as previously presented and Claims 21 and 22 are withdrawn.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 12, 15, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Player et al (US 5,256,186).

Player et al is applied as discussed in the office action mailed 6/11/2009.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fugleberg (US 5,199,974).

Fugleberg is applied as discussed in the office action mailed 6/11/2009.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fugleberg as applied to claim 12 above, and further in view of Baldock et al (US 5,282,881).

Fugleberg in view of Baldock et al is applied as discussed in the office action mailed 6/11/2009.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fugleberg as applied to claim 12 above, and further in view of SU 1048810.

Fugleberg in view of SU '810 is applied as discussed in the office action mailed 6/11/2009.

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***Allowable Subject Matter***

Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cited prior art does not disclose or suggest fuming a major part of Ge together with Zn and Pb as in Claim 17.

***Response to Arguments***

Applicant's arguments filed 09/10/2009 have been fully considered but they are not persuasive. Regarding Player et al, the examiner does not dispute that the final slag compositions in Table 3 are not within the claimed range of expression (1). However, the examiner was relying on the entire disclosure, which includes broader ranges of final slag composition in column 2, lines 13-16: 10-20% Fe, 5-15% SiO<sub>2</sub>, 2-5% CaO and 0-3% MgO. Over the entire disclosed range, not just including the minimum and maximum for all components is 0.80-6 [a typographical error in the prior office action] as shown below:

Fe	SiO <sub>2</sub>	CaO	MgO	Exp 1	
10	5	2	0	2.4	all minimums
20	15	5	3	2.66667	all maximums
20	5	5	3	6	
10	15	2	0	0.8	

Applicant does not claim or disclose any preferred ranges for Fe, SiO<sub>2</sub> or CaO. The range of MgO (less than 5%) in Claim 15 is taught by Player et al. Therefore, Player et al teaches meeting the limitations in the claimed expressions. Applicants can rebut a *prima facie* case of obviousness based on overlapping ranges by showing the criticality of the claimed range or by

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showing that the art, in any material respect, teaches away from the claimed invention. See MPEP § 2144.05 III.

Similarly in Fugleberg, applicant argues that this reference does not teach the claimed ranges. The examiner included all of the Fe in the slag, which includes the Fe in Fe<sub>3</sub>O<sub>4</sub>.

Applicant does not distinguish the type or state of Fe.

Example	Fe	Fe from Fe <sub>3</sub> O <sub>4</sub>	total Fe	SiO <sub>2</sub>	CaO	Exp 1	
1	31	12.59	43.59	20	2.9	2.3245	all minimums
	46.2	32.34	78.54	28.8	5.4	2.91458	all maximums
			78.54	20	5.4	4.197	
			43.59	28.8	2.9	1.61424	
2	33.9	9.77	43.67	19.1	5.9	2.59529	all minimums
	42.5	25	67.5	24.8	10.7	3.15323	all maximums
			67.5	19.1	10.7	4.09424	
			43.67	24.8	5.9	1.99879	

As stated above, applicant does not claim or disclose any preferred ranges for Fe, SiO<sub>2</sub> or CaO.

The range of MgO (less than 5%) in Claim 15 is taught by Fugleberg as zero. Therefore,

Fugleberg teaches meeting the limitations in the claimed expressions. Applicants can rebut a

*prima facie* case of obviousness based on overlapping ranges by showing the criticality of the

claimed range or by showing that the art, in any material respect, teaches away from the claimed invention. See MPEP § 2144.05 III.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/

Primary Examiner

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/T. M. M./

Examiner, Art Unit 1793

4 November 2009